

What Is Claimed Is:

1. An apparatus for improving the visibility in a motor vehicle, comprising
  - at least one infrared-sensitive image sensor system for acquiring optical signals from the surrounding environment of the motor vehicle,
  - at least one signaling means for producing items of driver information,
  - and at least one processing unit for controlling the at least one signaling means as a function of the acquired optical signals,wherein the at least one processing unit has means for recognizing the course of the roadway from at least the optical signals, and for controlling the at least one signaling means for producing the items of driver information as a function of the recognized course of the roadway.
2. The apparatus as recited in Claim 1, wherein the processing unit has means for recognizing at least one object, for example at least one motor vehicle and/or at least one pedestrian, from at least the optical signals, and for controlling the at least one signaling means as a function of the position of the at least one recognized object in relation to the course of the roadway.
3. The apparatus as recited in one of the preceding claims, wherein the processing unit has means for controlling the signaling means as a function of the driving situation, in particular the dangerousness of the driving situation, and/or as a function of the visibility conditions.
4. The apparatus as recited in one of the preceding claims, wherein the processing unit has means for carrying out the recognition of the course of the roadway and/or the recognition of objects as a function of signals of at least one additional sensor, for example at least one radar sensor and/or at least one ultrasonic sensor and/or at least one LIDAR distance sensor.
5. The apparatus as recited in one of the preceding claims, wherein the items of driver information are suitable for the representation of at least one object, in particular at least one motor vehicle and/or at least one pedestrian, and/or of the course of the roadway.

6. The apparatus as recited in one of the preceding claims, wherein the items of driver information are at least one light pulse and/or at least one warning symbol and/or at least one image marking and/or at least one segment of an image and/or at least one acoustic signal and/or at least one haptic signal.

7. The apparatus as recited in one of the preceding claims, wherein at least one infrared radiation source illuminates at least a part of the surrounding environment, acquired by the infrared-sensitive image sensor system, of the motor vehicle.

8. The apparatus as recited in one of the preceding claims, wherein the at least one signaling means is at least one optical signaling means, in particular at least one head-up display and/or at least one display screen, and/or at least one acoustic signaling means and/or at least one haptic signaling means.

9. A method for improving the visibility in a motor vehicle

- at least one infrared-sensitive image sensor system acquiring optical signals from the surrounding environment of the motor vehicle,
- at least one processing unit controlling at least one signaling means in order to produce items of driver information as a function of the acquired optical signals,
- wherein the processing unit recognizes the course of the roadway from at least the optical signals, and the items of driver information are produced as a function of the recognized course of the roadway.

10. The method as recited in Claim 9,

wherein

- the items of driver information are produced as a function of the position of at least one object in relation to the course of the roadway, the at least one object, for example at least one motor vehicle and/or at least one pedestrian, being recognized from at least the optical signals, and/or
- the items of driver information are produced as a function of the driving situation, in particular the dangerousness of the driving situation, and/or
- the items of driver information are produced as a function of the visibility conditions, and/or

- the items of driver information are produced as a function of signals of at least one additional sensor, for example at least one radar sensor and/or at least one ultrasonic sensor and/or at least one LIDAR distance sensor, and/or
- the items of driver information are suitable for the representation of at least one object, in particular at least one motor vehicle and/or at least one pedestrian, and/or of the course of the roadway, and/or
- the items of driver information are at least one light pulse and/or at least one warning symbol and/or at least one image marking and/or at least one segment of an image and/or at least one acoustic signal and/or at least one haptic signal.

11. A computer program having program code means for executing all steps of any of Claims 9 and 10, if the program is executed on a computer.